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Abuin, Alejandro

APR 1 8 2002

1636

Not Yet Assigned
EX-0246-USA **Application Number** RANSMITTAL Filing Date **First Named Inventor FORM** Group Art Unit d for all correspondence after initial filing) **Examiner Name** Total Number of Pages in This Submission Attorney Docket Number ENCLOSURES (check all that apply) Assignment Papers After Allowance Communication Fee Transmittal Form (for an Application) to Group Appeal Communication to Board Drawing(s) Fee Attached of Appeals and Interferences Appeal Communication to Group Amendment / Reply Licensing-related Papers (Appeal Notice, Brief, Reply Brief) Proprietary Information Petition After Final Petition to Convert to a Status Letter Affidavits/declaration(s) Provisional Application Other Enclosure(s) (please Power of Attorney, Revocation Extension of Time Request Change of Correspondence Address identify below): - Return Postcard Terminal Disclaimer Express Abandonment Request - Form PTO1449 and 98 References Cited Request for Refund Information Disclosure Statement Certified Copy of Priority CD, Number of CD(s) __ Document(s) Remarks Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Lexicon Genetics Incorporated Firm Reg. No. 41,866 Lance K. Ishimoto Individual name Res G. Seferian Signature egilb (40162 Date April 10, 2002 **CERTIFICATE OF MAILING** I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 2023 Michelle Klein Typed or printed name

Date

April 10, 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

Abuin et al.

Application No.:

09/963,299

Hed:

September 26, 2001

Group Art Unit: 1636

e: Novel Murine Polynucleotide Sequences

Examiner:

Not Yet Assigned

d Mutant Cells and Mutant Animals Defined Thereby

Attorney Docket No.: LEX-0246-USA

Assistant Commissioner for Patents Box DD Arlington, VA 22202 **RECEIVED**

APR 1 8 2002

INFORMATION DISCLOSURE STATEMENT

TECH CENTER 1600/2900

Dear Sir:

This Information Disclosure Statement is submitted:

X under 37 CFR 1.97(b), or
 (Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)

 under 37 CFR 1.97(c) together with either a:
 Certification under 37 CFR 1.97(e), or

a \$240.00 fee under 37 CFR 1.17(p), or

(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

__ under 37 CFR 1.97(d) together with a:

- ___ Certification under 37 CFR 1.97(e), and
- __ a petition under 37 CFR 1.97(d)(2)(ii), and
- __ a \$130.00 petition fee set forth in 37 CFR 1.17(i)(1).
- (Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

X Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

24231

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement to Lexicon Genetics Deposit Account No. 50-0892. A copy of this sheet is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

April 10, 2002

Date

Lance K. Ishimoto

Reg. No. 41,866

LEXICON GENETICS INCORPORATED

(281) 863-3333

24231

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known 09/963.299 **Application Number** Filing Date September 26, 2001 **First Named Inventor** Abuin Group Art Unit 1636 Examiner Name Not Yet Assigned Attorney Docket Number LEX-0246-USA

The state of				U.S. PATENT DOCUMEN	TS	
Examile	Cite	U.S. Patent Document Number Kind Code² (if known)		Name of Patentee or Applicant	Date of Publication of cited Document	Pages, Columns, Lines, Where Relevant
Initials	No.¹			of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear
35	AA	4,190,496		Rubenstein et al	02/26/80	
	AB	4,215,051		Schroeder et al	07/29/80	
	AC	4,376,110		David et al	03/08/83	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,683,202		Mullis	07/28/87	
	AF	4,689,405		Frank et al	08/25/87	DECENTED
	AG	4,713,326		Dattagupta et al	12/15/87	RECEIVED
	АН	4,946,778		Ladner et al	08/07/90	
	AÌ	5,143,854		Pirrung et al	09/01/92	APR 1 8 2002
	AJ	5,252,743		Barrett et al	10/12/93	
	AK	5,270,170		Schatz et al	12/14/93	TECH CENTED 4000/00
	AL	5,405,783		Pirrung et al	04/11/95	TECH CENTER 1600/29
	AM	5,424,186		Fodor et al	06/13/95	
	AN	5,432,018		Dower et al	07/11/95	
	AO	5,445,934		Fodor et al	08/29/95	
	ΑP	5,464,764		Capecchi et al	11/07/95	
	AQ	5,556,752		Lockhart et al	09/17/96	
	AR	5,700,637		Southern	12/23/97	
	AS	5,744,305		Fodor et al	04/28/98	
	AT	5,877,397		Lonberg et al	03/02/99	
	AU	6,075,181		Kucherlapati et al	06/13/00	
	AV	6,136,566		Sands et al	10/24/00	
	AW	6,139,833		Burgess et al	10/31/00	
	AX	6,207,371		Zambrowicz et al	03/27/01	

i				FORE	IGN PATENT DOCUMENTS			
Examiner Initials*		Foreign Patent Document				Date of	Pages, Columns,	
	Cite No. ¹	Office ³	Number ⁴	Kind Code⁵ (<i>if known</i>)	Name of Patentee or Applicant of Cited Document	Publication of cited Document MM-DD-YYYY	Lines, Where Relevant Passages or	Τ°
							Figures Appear	

Examiner	Date
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPRISANT

(use as many sheets as necessary)

Complete if Known Application Number 09/963.299 Filing Date September 26, 2001 First Named Inventor Abuin Group Art Unit 1636 Examiner Name Not Yet Assigned TECH CENTER 1600/2000

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<u>-\$ </u>	OR ART - NON PATENT LITERATURE DOCUMENTS									
ned Cite *• No.¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.									
AY Askew et al, 1989, "Molecular Recognition with Convergent Functional Groups, 6. Synthetic and Structural Studies a Model Receptor for Nucleic Acid Components", J. Am. Chem. Soc. 111:1082-1090.										
AZ	Been et al, 1986, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans- Splicing, and RNA Enzyme Activity", Cell 47:207-216.									
ВА	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.									
BB	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.									
BC	Brinster et al, 1982, "Regulation of metallothionein-thymidine kinase fusion plasmids injected into mouse eggs", Nature 296:39-41.									
BD	Brisson et al, 1984, "Expression of a bacterial gene in plants by using a viral vector", Nature 310:511-514.									
BE	Broglie et al, 1984, "Light-Regulated Expression of a Pea Ribulose-1,5-Bisphosphate Carboxylase Small Subunit Gene in Transformed Plant Cells", Science 224: 838-843.									
BF	Butler, 1981, "The Amplified ELISA: Principles of and Applications for the Comparative Quantitation of Class and Subclass Antibodies and the Distribution of Antibodies and Antigens in Biochemical Separates", Methods in Enzymology 73:482-523.									
BG	Chien et al, 1991, "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest", Proc. Natl. Acad. Sci. USA 88:9578-9582.									
ВН	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14.									
ВІ	Coruzzi et al, 1984, "Tissue-specific and light-regulated expression of a pea nuclear gene encoding the small subunit of ribulose-1,5-bisphosphate carboxylase", EMBO Journal 3(8):1671-1679.									
BJ Gautier et al, 1987, "α-DNA IV:α-anomeric and β-anomeric tetrathymidylates covalently linked to intercala oxazolopyridocarbazole. Synthesis, physiochemical properties and poly (rA) binding", Nucleic Acids Resear 15(16):6625-6641.										
ВК	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229.									
BL	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.									
ВМ	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.									
BN	Gurley et al, 1986, "Upstream Sequences Required for Efficient Expression of a Soybean Heat Shock Gene", Mol. & Cell. Biology 6(2):559-565.									
во	Haselloff and Gerlach, 1988, "Simple RNA enzymes with new and highly specific endoribonuclease activities", Nature 334:585-591.									
BP	Helene, 1991, "The anti-gene strategy: control of gene expression by triplex-forming-oligonucleotides", Anti-Cancer Drug Design 6:569-584.									
BQ	Helene et al, 1992, "Control of Gene Expression by Triple Helix-Forming Oligonucleotides", Annals N.Y. Acad. Sciences 660:27-36.									
BR	Houghten et al, 1991, "Generation and use of synthetic peptide combinatorial libraries for basic research and drug discovery", Nature 354:84-86.									
BS	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.									
ВТ	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.									
BU	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330.									
	BA BB BC BF BG BH BI BN									

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Complete if Known **Application Number** 09/963.299 **Filing Date** September 26, 2001 **First Named Inventor** Abuin Group Art Unit 1636 APR 1 8 2002 **Examiner Name** Not Yet Assigned

Attorney Docket Number | LEX-0246-USA

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		OTHER PRIOR A	ART - N	ION PATENT LITERATU	RE DOCUMENTS						
Examin er Initials*	Cite No. ¹	item (book, magazine, joi	urnal, s	-,,	, etc.), date, page(s), volume-issue						
	BV		ybridiza		tary nona(2'-O-methyl)ribonucleotides", Nu	ucleic					
	BW	<u> </u>		tions in the lpp gene of Escher	ichia coli", Nucleic Acids Research 13(9):3	101-					
	вх	Kohler & Milstein, 1975, "Continuou 256:495-497.	us cultur	es of fused cells secreting anti	body of predefined specificity", Nature						
	ВҮ	Lakso et al, 1992, "Targeted oncog Sci. USA 89:6232-6236.	jene act	vation by site-specific recombi	nation in transgenic mice", Proc. Natl. Acad	d.					
	BZ	Lam et al, 1991, "A new type of syn	nthetic p	eptide library for identifying liga	ind-binding activity", Nature 354:82-84.						
	CA	Lavitrano et al, 1989, "Sperm Cells Cell 57:717-723.	as Vect	ors for Introducing Foreign DN	A into Eggs: Genetic Transformation of Mi	ce",					
	СВ	Lemaitre et al, 1987, "Specific antiv complementary to vesicular stomat	viral acti titus viru	vity of a poly(L-lysine)-conjugat s N protein mRNA initiation site	ed oligodeoxyribonucleotide sequence o", Proc. Natl. Acad. Sci. USA 84:648-652.						
	СС	Letsinger et al, 1989, "Cholesteryl-creplication of human immunodeficie	conjugat ency viru	ted oligonucleotides: Synthesis us in cell culture", Proc. Natl. Ad	, properties, and activity as inhibitors of cad. Sci. USA 86:6553-6556.						
	CD	Lewis et al, 1989, "Automated site- generation", Proc. R. Soc. Lond. B	directed 236:141	drug design: the formation of r-162.	nolecular templates in primary structure						
	CE	Lewis and Dean, 1989, "Automated site-directed drug design: the concept of spacer skeletons for primary structure generation", Proc. R. Soc. Lond. B 236:125-140.									
	CF	Lo, 1983, "Transformation by lontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814.									
	CG	Logan et al, 1984, "Adenovirus tripa Acad. Sci. USA 81:3655-3659.	artite lea	der sequence enhances trans	ation of mRNAs late after infection", Proc.	Nati.					
	СН	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823.									
	CI	Luo et al, 1997, "Mammalian Two-l BioTechniques 22(2):350-352.	Hybrid S	ystem: A Complementary Appr	oach to the Yeast Two-Hybrid System",						
	CJ	Maher, 1992, "DNA Triple-Helix Fo	rmation:	An Approach to Artificial Gene	Repressors?", BioEssays 14(12):807-815	. 71172					
	СК	McKinlay et al, 1989, "Rational Des	ign of A	ntiviral Agents", Annu. Rev. Ph	armacol. Toxicol. 29:111-122.						
	CL	Morrison et al, 1984, "Chimeric hun domains", Proc. Natl. Acad. Sci. US	nan anti SA 81:68	body molecules: Mouse antige 351-6855.	n-binding domains with human constant re	gion					
	СМ	Mulligan & Berg, 1981, "Selection for phosphoribosyltransferase", Proc. N	or anima Natl. Aca	al cells that express the Escher ad. Sci. USA 78(4):2072-2076.	ichia coli gene coding for xanthine-guanine)					
	CN	Neuberger et al, 1984, "Recombina	ant antib	odies possessing novel effecto	r functions", Nature 312:604-608.						
	СО	Nisonoff, 1991, "Idiotypes: Concept	ts and A	pplications", J. of Immunology	147:2429-2438.						
		expressing a prokaryotic dihydrofola	ate redu	ctase", Proc. Natl. Acad. Sci. L							
	CQ	Platt, K.A. et al, 1994, "Independen Promoter in Transgenic Mice", The	t Regula Journal	ation of Adipose Tissue-specific of Biological Chemistry 269(46	city and Obesity Response of the Adipsin 63):28558-28562.						
	CR	Ripka, 1988, "Computers picture th	e perfec	t drug", New Scientist 16:54-5	7.						
		Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794.									
	СТ	Santerre et al, 1984, "Expression of markers in mouse L cells", Gene 30			nd G418 resistance as dominant-selection						
4, 1	CU	Sarin et al, 1988, "Inhibition of acqu methylphosphonates", Proc. Natl. A	uired imr Acad. Sc	nunodeficiency syndrome virus i. USA 85:7448-7451.	s by oligodeoxynucleoside						
	CV	Sarver et al, 1990, "Ribozymes as I	Potentia	l Anti-HIV-1 Therapeutic Agent	s", Science 247:1222-1225.						
	CW	Shilo et al, 1981, "DNA sequences	homolo	gous to vertebrate oncogenes	are conserved in Drosophila melanogaster	н					

Under the Paperwork Reduction Act of 1995,	rsons are required to r	Patent a respond to a collection of information	
Substitute for form 1449B/PTO			Complete if Known
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		PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examin er Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	сх	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593.	
	CY	Smithies, 1985, "Insertion of DNA sequences into the human chromosomal β-globin locus by homologous recombination" Nature 317:230-234.	,
	CZ	Songyang et al, 1993, "SH2 Domains Recognize Specific Phosphopeptide Sequences", Cell 72:767-778.	
	DA	Stein et al, 1988, "Physiochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221.	
	DB	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034.	
	DC	Takamatsu et al, 1987, "Expression of bacterial chloramphenicol acetyltransferase gene in tobacco plants mediated by TMV-RNA", EMBO Journal 6(2):307-311.	
	DD	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454.	
	DE	Thomas et al, 1987, "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells", Cell 51:503-512.	
		Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targetin in Embryonic Stem Cells", Cell 56:313-321.	g
· 	DG	Van der Krol et al., 1988, "Modulation of Eukaryotic Gene Expression by Complementary RNA or DNA Sequences", BioTechniques 6(10):958-976.	İ
	DH	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152.	
		Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509.	
	DJ	Voller et al, 1978, "Enzyme immunoassays with special reference to ELISA techniques", J. Clinical Pathology 31:507-520.	
		Wagner et al, 1981, "Nucleotide sequence of the thymidine kinase gene of herpes simplex virus type 1", Proc. Natl. Acad. Sci. USA 78(3):1441-1445.	
	DL	Wagner, 1994, "Gene inhibition using antisense oligodeoxynucleotides", Nature 372:333-335.	
		Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546.	
	DN	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232.	
		Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570.	
	DP	Yamamoto et al, 1980, "Identification of a Functional Promoter in the Long Terminal Repeat of Rous Sarcoma Virus", Cell 22:787-797.	
	DQ	Zaug et al, 1984, "A Labile Phosphodiester Bond at the Ligation Junction in a Circular Intervening Sequence RNA", Science 224:574-578.	
	DR	Zaug et al, 1986, "The Tetrahymena ribozyme acts like an RNA restriction endonuclease", Nature 324:429-433.	
	DS	Zaug & Cech, 1986, "The Intervening Sequence RNA of Tetrahymena is an Enzyme", Science 231:470-475.	
	DT	Zon, 1988, "Oligonucleotide Analogues as Potential Chemotherapeutic Agents", Pharmaceutical Research 5(9):539-549.	

Examiner	Date	i	
Signature	Considered		

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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